Giant Helium Reserve Awaits Likely Closure

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John Hamak of the Federal Helium Reserve, in a 2010 photo at a facility in Cliffside, Texas.
The gas is crucial in high-tech and medical-device manufacturing and in industrial operations.

One of the world's largest reserves of helium could be shut down as early as next summer unless Congress passes legislation to exempt the stockpile from the sunset provision of a 1996 law, the U.S. Bureau of Land Management said.

The Federal Helium Reserve, located deep underground near Amarillo, Texas, supplies a third of the world's crude helium, and its closure could strain an already limited supply of the gas that has become crucial in the manufacture of many high-tech and medical devices and is extensively used in health-care, defense and high-tech industry operations.

The stockpile is at the mercy of a law dating back to 1996, when Congress mandated the reserve remain in operation only until its helium supplies were sold to pay down a $1.3 billion debt incurred by the BLM to acquire the helium and equipment to process it.

Most of that debt has been paid, with an estimated $24 million expected to remain at the end of 2012. The BLM said the reserve is expected to sell $200 million of helium this year, putting it on track to repay the remaining debt in 2013.

In 2010, a National Academy of Science report warned of a possible helium shortage if the reserve closed, and House and Senate committee at the time considered taking up the matter. Now, a proposed Senate bill would allow the reserve to continue selling helium, even after the debt is repaid.

"We need to authorize Washington to sell from stockpile for another 10 years—and do it at market prices," said Sen. John Barrasso (R., Wyo.), one of the bill's sponsors.

House lawmakers held a hearing in July, which included testimony from industry and scientific experts, but the House has yet to propose a bill.

Sen. Jeff Bingaman (D., N.M.), chairman of the Senate Energy and Natural Resources Committee and one of the bill's authors, said the measure could be added to "must-pass" legislation in the fall. "We're trying to take action early enough that we head off a potentially instable market," Mr. Bingaman said.

However, many helium industry insiders say they are already experiencing instability, largely as a result of government price-setting. Increased demand and limited supplies have resulted in the government's rate—which
will rise to $84 per thousand cubic feet in October—essentially setting the global price. But the government sells the gas using a formula designed to guarantee repayment of the debt by 2015, and some are calling for the government to sell at higher, open-market prices, a move that also would provide additional revenue for the government.

The underground storage facility is the largest of its kind in the world. It lies beneath 11,000 acres of land and is capable of holding 38 billion cubic feet of gas, according to the BLM. The reserve is supplied via pipeline from plants in Kansas, Oklahoma and Texas that extract the helium from the ground. The crude helium is later sent from the reserve to refineries that ready it for commercial or industrial use.

In recent years, because the government dominates the market, private firms have seen little reason to invest in helium extraction and refining. Now, the possible shutdown of the reserve could lead a rise in prices to a point that would make production profitable, though it could take years to establish supplies lines from as far away as Qatar and Russia, which have reserves under development.

"If you think helium is in short supply now, you haven't seen anything yet," said Walter Nelson, an executive at Air Products and Chemicals Inc., a supplier of industrial gases, at a Congressional hearing in July.

Medical-imaging machines, which are used to diagnose strokes, cancers and sports injuries, rely on liquefied helium for cooling. Helium also is used in the production of LCD screens and fiber-optic cables. The National Aeronautics and Space Administration and the military need the element to purge rocket engines. Helium also is used in the welding industry.

Hospitals run by the University of California, San Diego will soon only receive 80% of their typical supply, said William Bradley, chairman of its radiology department. That will likely force the school to pay a premium to keep its 10 magnetic resonance imaging, or MRI, machines operating.

"Ultimately the costs go up to patients and insurance companies," Dr. Bradley said.

The concern is even greater for older MRI hardware, which are more prevalent in rural areas, because they need to be topped off with helium on a regular basis. If a machine in rural Oregon is shut down, "folks will have to travel hundreds of miles…and that means a lot of studies wouldn't be done," said John Tongue, an orthopedic surgeon from Tualatin, Ore.

On the lighter side, Dan Stevens, owner of two Party Adventure stores in suburban Detroit, says the shortage could make a dozen colorful birthday balloons a tradition of the past. "I'm predicting we soon won't blow up any latex balloons," he said, instead reserving the precious gas for silvery Mylar balloons, which last longer and fetch higher prices.

He's had to turn down balloon business during the peak graduation and family party season, with sales off more than 20% because there is no substitute for the gas.

"It's not like we can fill them with hydrogen and put a warning tag on," he said, referring to the highly flammable, lighter-than-air gas.

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